

Claims

- Sub-A4*
1. Gas generator comprising at least one first body, comprising means for the generation of gas, and at least one second body, comprising means for the generation of a neutralisation agent, wherein means are present for contacting the said neutralisation agent with the said first body, to  
5 neutralise reaction products (slag) from the generation of gas in the said first body, and wherein means are present for operating the generation of a neutralisation agent in the second body at a temporal and/or spatial interval from the generation of gas in the first body.
  2. Gas generator according to claim 1, wherein the said means for  
10 generating a gas comprise components that generate nitrogen, oxygen, hydrogen or combinations thereof.
  3. Gas generator according to claim 2, wherein the means in the first body comprise a gas-penetrable solid material comprising a gas source, cementing agent and optionally a heat absorbing mixture, wherein the solid  
15 material has a porosity of 35-60 wt.%.
  4. Gas generator according to claim 1-3, wherein said first body comprises means for generating nitrogen, preferably an azide, more preferably sodium azide.
  5. Gas generator according to claim 1-4, wherein the reaction  
20 products comprise slag containing sodium.
  6. Gas generator according to any of the claims 1-5, wherein the second body contains a gas source and a neutralising agent.
  7. Gas generator according to any of the claims 1-6, wherein the neutralisation agent is sulphur.
  - 25 8. Gas generator according to any of the claims 1-7, wherein the combined amounts of the gas, preferably nitrogen sources in the first and second body comprises 50-80 wt.% drawn on the total weight of the gas

generator and the amount of neutralisation agent in the second body 47-90 wt.% of neutralisation agent, drawn on the weight of the second body.

9. Gas generator according to any of the claims 1-8, wherein the second body is between 17 and 35 wt.%, drawn on the total weight of the gas generator.

10. Gas generator according to any of the claims 1-9, wherein the second body contains 10 to 53 wt.% of the nitrogen source and 47 to 90 wt.% of the neutralisation agent.

11. Gas generator according to any of the claims 1-10, wherein the generated gases are cooled by a heat absorbing material.

12. Gas generator according to any of the claims 1-11, whereby the heat absorbing material is included in the first body.

13. Gas generator according to claim 1-12, wherein downstream from the first body means are present for cooling and/or filtering the gases.

14. Gas generator according to claim 1-13, wherein said means also comprise neutralising agents for contaminants entrained in the gas.

15. Gas generator according to claim 1-14, wherein the said first and second bodies are contained within one container, said container having at least one outlet for generated gas.

16. Process for the generation of gases, preferably nitrogen, comprising the steps of:

- decomposition of a gas-penetrable porous solid material in a first body, whereby gas and other reaction products are generated at a decomposition front;
- generating a neutralisation agent in a second body;
- neutralising the said other reaction products in the first body by reaction with the neutralisation agent;
- maintaining a temporal and/or spatial interval between the decomposition front of the first body and a neutralisation front obtained by passing the neutralisation agent from the second body into the first body.

17. Process according to claim 16, wherein the generated gases are cooled by passing the gases through the porous solid material in the same direction as the reaction front is moving.

18. Process according to claims 16 or 17, wherein heat is absorbed in the porous body, which heat is formed in the decomposition of the gas-penetrable porous solid material.

19. Process according to claims 11-13, wherein the amounts of heat formed and absorbed are such that the generated gas is cooled to a temperature below 150°C, preferably 100°C.

20. Process according to claim 17-19, wherein the heat absorbed in the porous solid material maintains the temperature necessary for decomposition of the gas-penetrable porous solid material.

21. Process according to claim 16-20, wherein the generated gases are passed through a filter and/or cooling means, downstream from the generation of the gases, said filter and/or cooling means optionally containing further neutralisation means.

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